List of Tables:

1. Articulators/place of articulation of speech sounds ............................................... 11
2. Internal efforts; opinion of different texts ................................................................. 15
3. Classification of speech sounds according to internal efforts .................................... 16
4. External efforts of Sanskrit speech sounds ................................................................. 33
5. External efforts according to different texts ............................................................... 34
6. Primary effort and place of articulation of Sanskrit speech sounds ......................... 37
7. Ratio of quick to intermediate to slow speech; view of different authors/texts .......... 49
8. Quantity of consonants; opinion of different Sanskrit texts .................................... 60
9. Duration of speech sounds in Kannada ......................................................................... 64
10. Hypothesized spectrographic correlates of Sanskrit speech sounds ....................... 68
11. Selected Sanskrit sparsas, their place of articulation and external efforts ................ 70
12. External efforts on spectrograms ................................................................................ 76
13. Difference in the place of articulation vs difference in the spectrograms of speech sounds ................................................................. 77
14. Formant frequencies of vowels for males and females ............................................. 81
15. Average values of formant frequencies obtained by different authors .................... 83
16. Characteristics of speech sounds ................................................................................ 88
17. Transition patterns of preceding and following vowels .......................................... 90
18. Spectrographic patterns of other Sanskrit sparsas as hypothesized ....................... 91
19. Mean duration of vowels ......................................................................................... 94
20. Mean duration of vowels for males and females ....................................................... 97
21. Vowel duration as a function of aspiration of the post-vocalic sparsa

22. Vowel duration as a function of voicing of the post-vocalic sparsa

23. Vowel duration as a function of the place of articulation of the post-vocalic sparsa

24. Mean duration of vowels preceding different sparsas

25. Vowel duration preceding fricatives

26. Vowel duration preceding semi-vowels

27. Duration of sparsas as a function of voicing

28. Aspiration duration of different sparsas

29. Sparsa duration as a function of its place of articulation

30. Sparsa duration as a function of the preceding vowel

31. Significance of difference between the duration of sparsas, fricatives and semi-vowels

32. Mean and standard deviation of [h] and [d]

33. Ranking of consonants for each individual based on mean duration and ranking of variability of consonants based on standard deviation

34. Duration of semi-vowels as a function of place of articulation

35. Duration of fricatives as a function of voicing and place of articulation